



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

Hayden, F. V., Holmes, W. H., Peale, A. C.—Ditto. Part II. Yellowstone National Park.

Hayden, F. V.—Maps and Panoramas of Twelfth Annual Report U. S. Geol. and Geog. Surv. Washington, 1883. From the department.

Calvin, S.—On the fauna found at Lime creek, Iowa. Ext. Amer. Jour. Science. From the author.

—:O:—

GENERAL NOTES.

GEOGRAPHY AND TRAVELS.¹

AMERICA.—The Athabasca fur district, according to the Rev. E. Petitot, contains large areas of fertile ground capable of supporting a considerable population. One of these areas is the delta formed by the mouths of the Athabasca and Peace rivers, at their entrance into Athabasca lake. Between Egg river, by which the Peace river enters the lake, and Duck portage on the Slave river, is an immense plain, intersected by rivulets and by the openings from the Peace to the Slave rivers. This delta is comparable in fertility with that of the Comargue in Provence. Besides these deltas, the zone of natural prairie along the Rocky mountains from the Upper Saskatchewan to the Hay river, comprises every condition necessary for settlement.

The Athabasca rises in a little lake at the foot of Mt. Brown (16,000 feet). Its course before entering Athabasca lake must be 500 to 600 miles. The passage between Athabasca and Great Slave lakes, known as Slave river, is 240 miles long, while the Mackenzie, as the river is called between the Great Slave lake and the ocean, is about 1045 miles in length. On the Athabasca proper, near the confluence of the Clear-water, is a chain of little volcanic cones, and in this district "boucanes," or vents, giving forth smoke and fire, abound. These are usually found on the line of deposits of incompletely carbonized lignite. Where the Athabasca meets Birch or Bark mountains there is a cañon some twenty-five to twenty-eight leagues long, called the Great Rapid, followed by several other rapids. There is no fall, but a rapid, flat sheet of water, obstructed by enormous boulders. At this part erosion has detached from the rocks a multitude of lenticular concretions varying from the size of a button to that of a large boat. Fossils abound in the shelly limestone that alternates with the bituminous schists.

Lake Athabasca, though the smallest of the great chain of lakes that stretches from the Gulf of St. Lawrence to the Arctic, is 230 miles long by twenty wide. Its bed is deep, and its banks granitic on three sides; but there are sandy or muddy deposits on its southern shore. Its northern side is wholly sterile and rocky, affording food to nothing but caribou.

M. Petitot's paper and map correct four geographical errors.

¹This department is edited by W. N. LOCKINGTON, Philadelphia.

Lake La Rouge, which drains into the Churchill, but was said to also open into the Beaver river, is shown not to do so, as the La Plonge river, though it rises near Lake La Rouge and falls into the Beaver, does not take the waters of the lake. Lake Wollaston does not, as was supposed by Hearne, communicate with Lake Athabasca. The most southerly stream that flows into the latter lake rises at the foot of Beasts mountain, close to Lake Wollaston, but has no communication with it. Great Bear lake, supposed by Sir J. Richardson to have three outlets, viz., Bear Lake and Hareskin rivers, entering the Mackenzie, and Beghula river, flowing to the Arctic, has really but one—that which bears the same name. The Hareskin river flows out of the Wind lake near Smith bay in Bear lake, and the Beghula or Anderson rises in a little lake at the foot of Mount Ti-dépay, quite to the north and some distance from Bear lake. The fourth error regards the famous great lake of the Eskimo, now known to be considerably smaller than was supposed. This lake was believed to have various openings into the Arctic, besides one in the mouths of the Mackenzie and another in the Anderson. It is now known that this lake has but one outlet, the "Natowdja," which flows direct into the Arctic ocean. M. Petitot represents the Beaver and Unknown rivers, which enter Lake Athabasca from the south, as of rather large size, and as rising in lakes near the drainage of the Churchill.

The Indians of the Athabasca and Mackenzie districts, chiefly Chipewyans and Crees, are so reduced that they barely reach 6000.

A VISIT TO STANLEY'S STATIONS IN AFRICA.—Mr. H. H. Johnston gives (*Proc. Roy. Geog. Soc.*, Oct., 1883) an interesting account of his trip up the Congo to Mr. Stanley's stations. Mr. Johnston first made an excursion from Underhill, a Baptist station on the Lower Congo, to Pallaballa. The villages upon the Lower Congo have a comfortable look, and the natives raise maize, cascada, limes, sometimes oranges, papaws, the passion flower, which gives the fruit known as maracuja or grenadilla, and bananas and plantains. The plots of garden are marked out by a line of bast tied from peg to peg, just as our gardeners do with a string; hens are kept in hen-coops made of withes and grass, and goats and sheep are housed in a shanty of palm-fronds. The Central African sheep have short hairy coats, and the rams have also a silky mane from chin to stomach. Here and there may be seen a black, high-shouldered bullock stalled in a not ill-fashioned manger of palm-fronds.

The houses are built neatly and well, and are usually raised a foot above the ground on a platform of beaten earth. They are made of stout poles, with a wide-spreading roof having a long pole in the center, and covered with thin laths and dried grass. The roof extends some feet beyond the house all round, and is

prolonged in front into a kind of veranda, where the inmates of the dwelling pass most of their time.

The scenery on the road to Pallaballa, as usual in the cataract region of the Congo, consists of grass-covered hills alternating with fertile valleys. Pallaballa is on the crest of a hill 1600 feet high, and is a station of the Livingston Inland Mission.

Many Portuguese words are introduced into the dialect. A prevailing superstition among the natives causes some person to be considered as *udokki*, or devil-possessed, whenever any one dies. The *udokki* must take the *casca* poison, which is, however, usually administered so as to be a strong emetic, under the notion that he will "bring up" the devil.

The young men undergo an initiation of six months, during which time they are called *inkimba*; do not wash any part of their bodies, and are chalked all over a ghastly white. The initiation has three or more stages. The *nganga*, or medicine-man, teaches them a distinct language, which is never taught to females.

Returning to Vivi, Mr. Johnston walked thence for Isangila (fifty-eight miles), a station facing the rapids of the Congo. The next station, Manyanga, is eighty miles further, and Leopoldville, on Stanley Pool, is ninety-five miles beyond Manyanga. The scenery between Manyanga and Leopoldville is beautiful. Stanley Pool is an expansion of the Congo, about twenty-five miles long by sixteen broad, with seventeen large islands and many floating islets formed of masses of aquatic vegetation. Around the cup-like basin of the pool is an incomplete rim of picturesque mountains, not rising above 4000 feet. The scenery is especially beautiful at the northern end, where the Upper Congo enters the pool. Further south the banks are lower, as the mountains recede from the water. "Brazzaville," or rather Mfwa, has no advantages as a site, and is a small, low-lying native village. Opposite to it a curious cliff, apparently of red clay, rises some fifty feet above the river. This is called Calina point, from Lieut. Calina, who was recently drowned in the dangerous current that sweeps around the promontory. This point belongs to the natives of a large village called Kinshasha, and these have hitherto refused to allow either Stanley or De Brazza to erect a station there. The latter, it is rumored, covets this point, and intends to fortify it, so that with it and with Mfwa opposite he could close the exit from Stanley Pool to the Lower Congo.

From Leopoldville our traveler ascended to Bolobó, 250 miles farther up the river. Above the pool the Congo varies in width from 600 to 1000 yards. Msuata, 110 miles from Leopoldville, is one of the prettiest of Mr. Stanley's stations, and is surrounded by natives who are very cordial to Europeans. Farther on is Ganchu, the "pirates' village" of Stanley's first descent of the river—so-called through misconception of the peaceful intentions

of the natives. The Wabuma, a stream at its mouth as wide as the Thames at Westminster, flows, according to Stanley, out of a lake seventy miles long (Lake Leopold II), runs for a great part of its course nearly parallel with the Congo, then bends away and broadens greatly, and finally contracts at its mouth. The Quango is probably an affluent of the Wabuma. The Bayansi village at the junction of Wabuma and the Congo has compact, tidy-looking houses, some containing three rooms.

The principal tribes between Bólóbó and Stanley pool are the Batéké, the Bayansi, and the Wabuma. All seem to be comparatively recent arrivals. The first are resident colonists from the north-west, between the Ogowé and the Congo; the second come from the Equator and north-east, and are the great travelers and traders of the Upper Congo, while the third inhabit the lower course of the river of the same name. All are kindly, merry, and courteous in behavior, of splendid physical development, and possessed of great artistic power, as shown in the decorations (often indelicate) of their utensils and arms. They are fond of music, and from their five-stringed instruments draw many harmonies of plaintive tone and perfect rhythm. The languages are of the Bantu stock, and that of the Wabuma is strangely guttural. All have many words identical with the Kaffir tongues. Zanzibaris can often make themselves understood.

ASIA AND THE INDIAN ARCHIPELAGO.—Mr. H. O. Forbes has returned to London after five years of wanderings. He first visited the Keeling island in the South Indian ocean, and then, proceeding to Java, explored its western and southern districts, making numerous observations on the fertilization of orchids, etc. He then spent eighteen months in Sumatra, making botanical collections, ascending and measuring the highest peaks of the Barisan range, visiting the elevated plateau of Blalauw, and staying awhile with a pagan race inhabiting the Passoemah lands round the Dempo volcano. The customs of this people differ widely from those of the surrounding peoples, and Mr. Forbes found there two hideously visaged sculptured figures. He also visited the forest-living Kœboes, supposed to be the remnants of the indigenes. Afterwards, accompanied by his wife, he visited the till then unexplored Timor-laut, and lastly traversed the eastern part of Timor.

According to Mr. R. Lydekker, of the Geological Survey of India, the deepest by far of the Indian River valleys is that of the Indus below Bowanji in Gilgit. Between that place and the Darel district, Lt. Col. H. C. B. Tanner states that the Indus flows in a narrow gorge bordered by precipices 20,000 feet in height above the ocean level, the level of the waters being a little over 3000 feet, thus giving nearly 17,000 feet as the actual depth of the gorge. The occurrence of river gravels and honey-combed rock surfaces

many hundreds of feet below the present level proves that a great part of this gorge has been cut by the river itself.

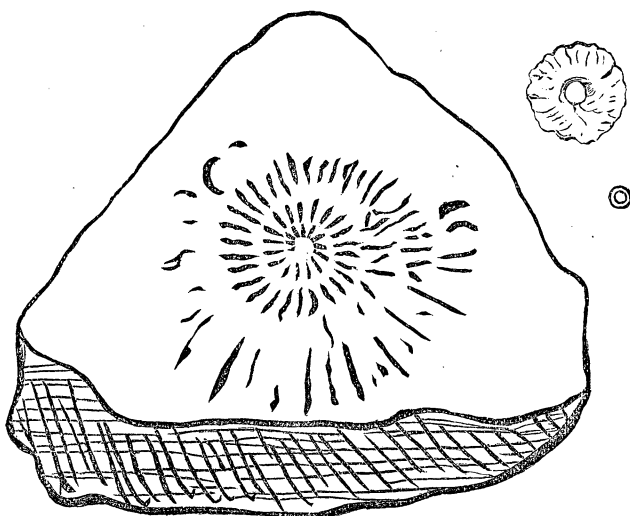
The lowest level of any Himalayan glacier is 9400 feet, at which point one of the glaciers about the Peak of Nanga-Parbat terminates, near the village of Tarshing. The most southern of the Mastagh or Kárákoram range (which contains the second highest known peak of the world, 28,000 feet) is covered with a complete network of glaciers, some of which (the Biafo and Bráldu glaciers) are only exceeded in size by the great Humboldt glacier of Greenland. The lowest limit of these glaciers is about 10,000 feet, and, contrary to what occurs in other parts of Káshmir, they descend quite into cultivated ground, and their terminal moraines are frequently covered with a thick growth of cypress.

GEOGRAPHICAL NOTES.—A letter from Mr. Stanley, dated July 14, reports the discovery of a new lake called Mantumba, and also the exploration of the course of the River Ikelembu, which is identical with the Malundu, and is a broad navigable stream. Mr. Stanley expresses increasing surprise at the density of the population in the equatorial parts of the Congo basin, and estimates the inhabitants of that basin at forty-five millions.—Dr. Stecker has returned to Germany after five years' travel in Africa. During this period, beside his journeyings in company with Dr. Gerhard Rohlfs, he discovered, east and south of Abyssinia, about a dozen countries which had not previously been visited by any European. He was imprisoned as a spy by King Melelek, of Shoa, but was released through the intercession of Marquis Antinori.—The East Siberian branch of the Russian Geographical Society is exploring the vicinity of Lake Baikal, where rich remains of the stone age are found. The Valley of Tunka seems to have been an immense workshop for the fabrication of quartz, jade and nephrite implements. The Valley of the Angara consists of a succession of large plains separated by narrow gorges. The Valley of Tunka was occupied by a series of lakes in the Post-pliocene period. On the Steppe of Ust-Unga M. Agapitoff has found a spot where thousands of implements could be collected. Pieces cover the steppe over a space of more than twelve miles. The stone hatchets of the steppe are similar to those in use among the Chukches.—Great results may be expected from the proposed expedition of Col. Prejevalsky to Thibet. He will be absent two or three years, during which time he hopes to explore the country of the Si Fans, between Lake Kookoo-nor and Batung, to traverse Northern Thibet and, if possible, follow up the Brahmaputra.—The last census of Bohemia gave the number of Czechs as 3,470,252, that of the Germans as 2,054,174. The number of foreigners in Bohemia is only 80,236, and consists chiefly of Germans. The Czech nationality preponderates in the center of Bohemia, in some districts to the almost total exclusion of the German element, but in the border districts,

especially those of the north-west, the Germans preponderate. —M. Lessup has written to the Russian Geographical Society that he has explored the Ongouz river, which was previously known only in the upper parts. Even the Tekkes did not know the route to the east of Mirza-chile.

GEOLOGY AND PALÆONTOLOGY.

THE POWER OF MOTION IN CRINOID STEMS.—At the Soldiers' Home, near Dayton, Ohio, I found the stone here figured. Imbedded on its upper surface lay a coil of crinoid joints in such a way as to indicate that they had all once formed part of the same crinoid stem. Indeed, the former unity of the first $2\frac{1}{2}$ coils is evident; but here we find traces of two coils, and a little farther out is seen a half coil of larger beads, however the parallelism of



Coil of Crinoid Joints.

the coils would indicate that these are only parts of the same stem, the intermediate parts having been removed and their connection broken.

The stone is of the Clinton group, but I cannot determine the species of the crinoid; although separate joints of the stem are extremely common, the crinoid heads are lacking. One thing is remarkable, the rapid increase in size of the joints of the column within $2\frac{1}{2}$ coils, or not quite three inches, from $\frac{1}{16}$ of an inch to about four times this diameter. I figure the end disks, enlarged two diameters.

The column is disposed in a perfect and natural coil. It is not customary to find things so arranged in nature unless it is either a law of their growth or the objects have the power of volition and can place themselves in such a position at will. The first